

## Organizing Committee

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Johannes Henn :: *IAS, Princeton*

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Marcus Spradlin :: *Brown University, Providence*

Stephan Stieberger :: *MPP Munchen*

## Secretary

Rosita Jurgeleit :: *MPP Munchen*

# Amplitudes 2013

<http://amplitudes2013.mpp.mpg.de>

April 28 - May 3, 2013

Ringberg Castle, Tegernsee, Germany



Max-Planck-Institut für Physik  
(Werner-Heisenberg-Institut)



Alexander von Humboldt  
Stiftung / Foundation

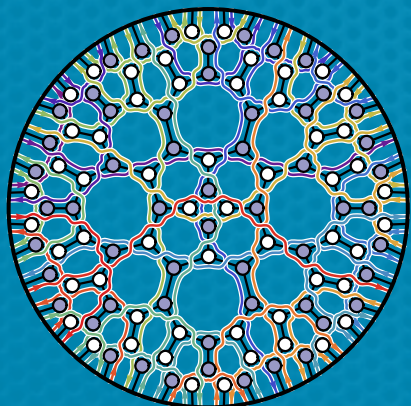


MAX-PLANCK-GESELLSCHAFT

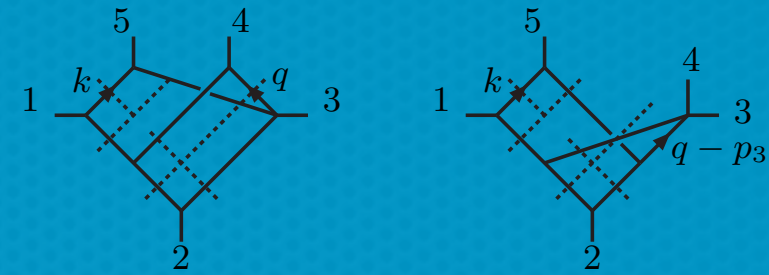


# Goal

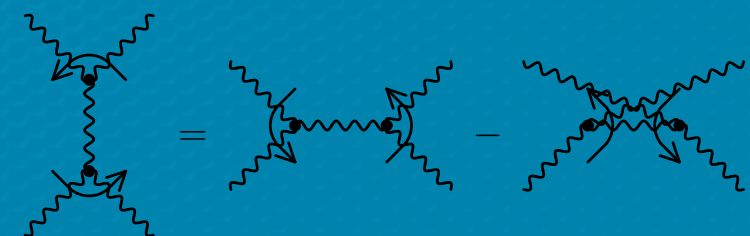
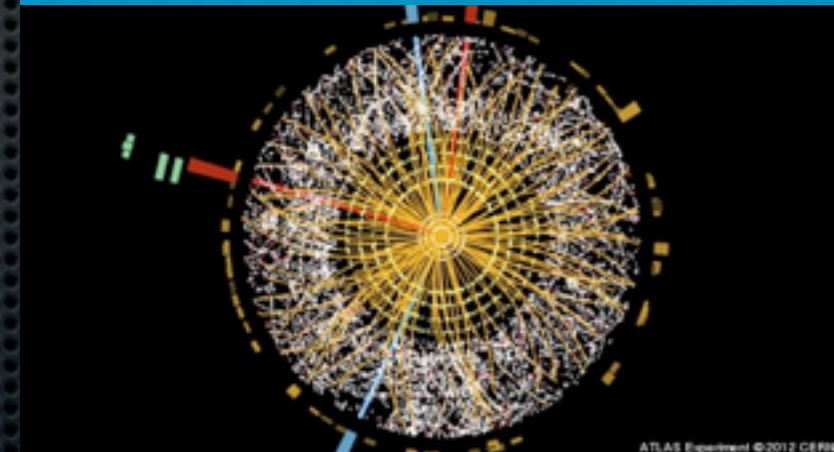
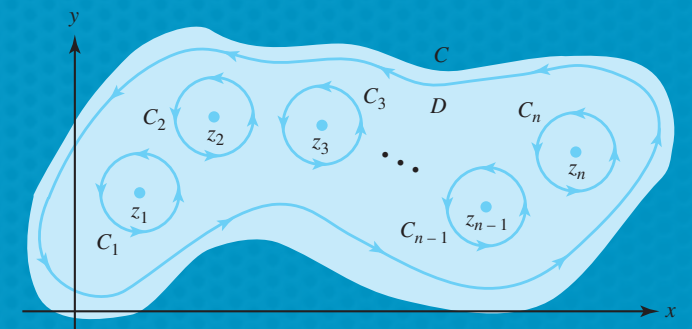
- The analytic study of scattering amplitudes has given rise to an active interaction between high energy physics, mathematics and string theory. The purpose of the workshop is to bring together leading experts working on novel methods for scattering amplitudes in gauge and gravity theories, reaching from formal developments to phenomenological applications. The topics to be discussed include, but are not limited to:
  - Integrals and integrands of perturbative quantum field theories
  - Scattering amplitudes in (super)gravity and their UV behaviour
  - Gauge/gravity dualities, AdS/CFT integrability, Wilson loops and strong coupling results
  - String amplitudes and their implications from/to field-theory
  - Mathematical structure of scattering amplitudes
  - Further analytic S-matrix inspired developments



$$\zeta(s) := \sum_{n=1}^{\infty} \frac{1}{n^s} = \prod_p (1 - p^{-s})^{-1}$$



$$\sum_{n=0}^{N-1} \frac{e^{2\pi i \frac{k}{N} n}}{\sqrt{N}} \frac{e^{-2\pi i \frac{k'}{N} n}}{\sqrt{N}} = \delta_{kk'}$$





# Ringberg Castle Tegernsee

✦ be inspired

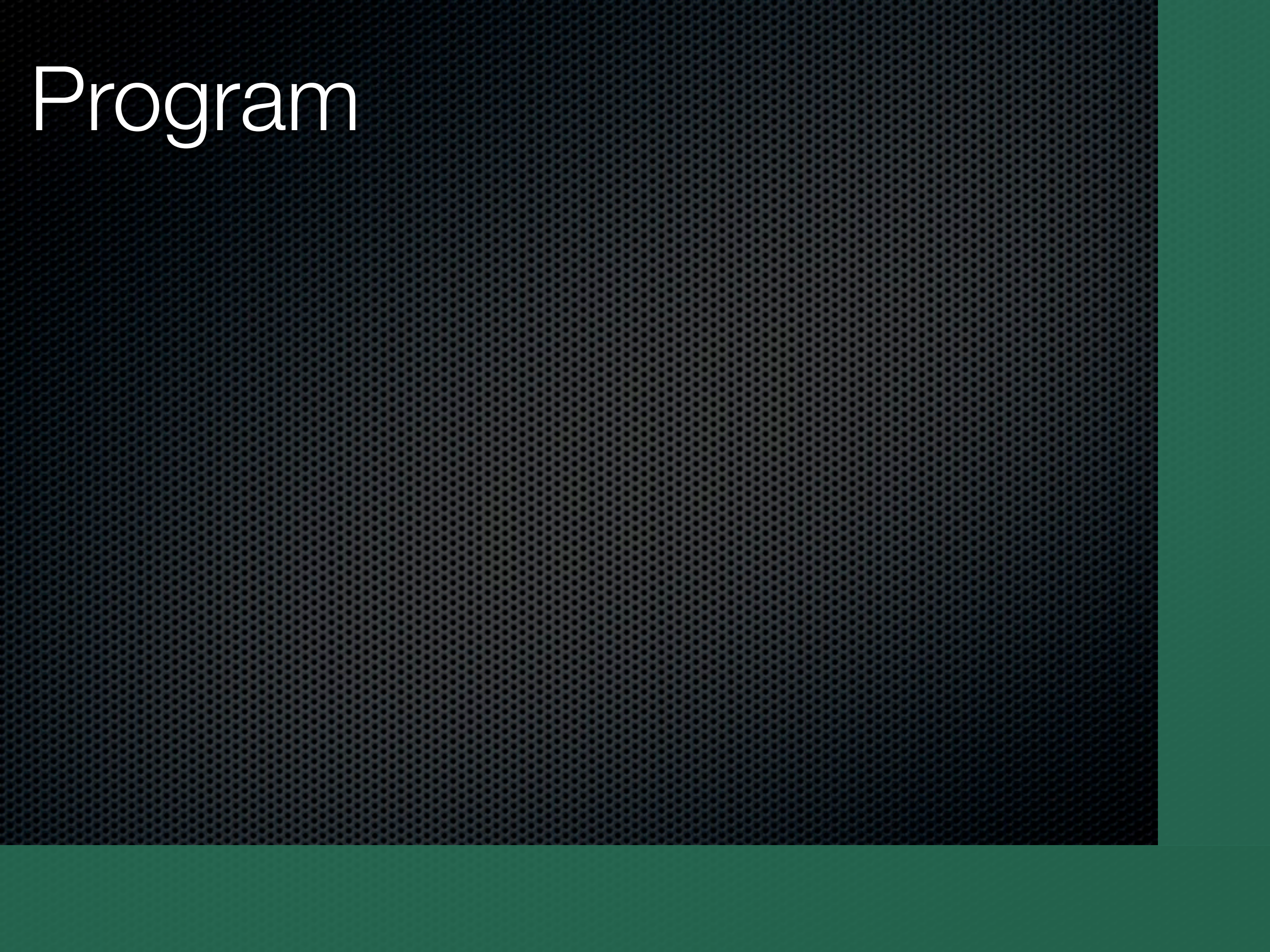




# Sponsors







# Program



# Program

| Time         | Monday<br>April 29 | Tuesday<br>April 30 | Wednesday<br>May 1  | Thursday<br>May 2 | Friday<br>May 3 |
|--------------|--------------------|---------------------|---|-------------------|-----------------|
| <i>Chair</i> | <i>Mastrolia</i>   | <i>Stieberger</i>   | <i>Lüst</i>   | <i>Beisert</i>    | <i>Henn</i>     |
| 9:30-10:15   | Pittau             | Volovich            | Trnka   | Taylor            | Brandhuber      |
| 10:15-11:00  | Badger             | Gangl               | Skinner   | Paulos            | Caron-Huot      |
| 11:00-11:30  | Coffee             | Coffee              | Coffee  | Coffee            | Coffee          |
| 11:30-12:15  | Feng               | Duhr                | Plefka  | Sever             | Korchemsky      |
| 12:15-14:30  | Lunch              | Lunch               | Lunch   | Lunch             | Lunch           |
| <i>Chair</i> | <i>Britto</i>      | <i>Boels</i>        | <a href="#">Excursion<br/>12:15</a><br><br><a href="#">Free Afternoon</a> | <i>Del Duca</i>   |                 |
| 14:30-15:15  | Carrasco           | Broedel             |   | Mirabella         |                 |
| 15:15-16:00  | Johansson          | Weinzierl           |   | Luisoni           |                 |
| 16:00-17:00  | Long Coffee        | Long Coffee         |   | Long Coffee       |                 |
| 17:00-17:45  | Huber              | Schomerus           |   | Kosower           |                 |
| 17:45-18:30  | Free               | Free                |   | Free              |                 |
| 18:30-20:00  | Dinner             | Dinner              | 19:00<br>Conference<br>Dinner   | Dinner            |                 |
| 20:00-21:00  | Hollik             |                     |   | Dixon             |                 |